IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re application of: Chad W. MERCER et al.   Group Art Unit: 2137

Serial No.: 09/911,149   Examiner: J. D. Popham

Filed: July 23, 2001   Confirmation No.: 4485

For: METHOD FOR ESTABLISHING A SECURITY ASSOCIATION BETWEEN
       TWO OR MORE COMPUTERS COMMUNICATING VIA AN
       INTERCONNECTED COMPUTER NETWORK

Docket No.: 044.0019

Customer No. : 29906

SUBMISSION OF APPELLANT APPEAL BRIEF

Mail Stop Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Appellant hereby submits its Appeal Brief in response to the final rejection of the

subject patent application.

The Commissioner is hereby authorized to charge Ingrassia, Fisher & Lorenz,
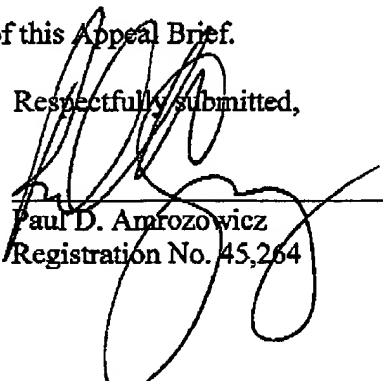
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Respectfully submitted,

Dated February 7, 2006

Paul D. Amrozowicz
Registration No. 45,264

Ingrassia, Fisher & Lorenz
Customer No. 29,906

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APPEAL BRIEF PURSUANT TO 37 C.F.R. § 41.37

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being transmitted by facsimile on the
date shown below to the United States Patent and Trademark Office at (571) 273-
8300 dated February 7, 2006.

by _____ .
Paul D. Amrozowicz, Reg. No. 45,264

TABLE OF CONTENTS

I.   Introduction

This is an Appeal Brief under 37 C.F.R. § 41.37 appealing the final rejection of the
Examiner dated August 5, 2005. Each of the topics required by 37 C.F.R. § 41.37 is presented in
this Brief and is labeled appropriately.

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II.   Real Party in Interest

Corrent Corporation ("Corrent") is the real party in interest of the present application.
An assignment of all rights in the present application to Corrent was executed by the inventors

10   and recorded by the U.S. Patent and Trademark Office at **Reel 012045, Frame 0727.**

III.   Related Appeals and Interferences

There are no appeals or interferences related to the present application of which

15   Appellant is aware.

IV.   Status of Claims

Claims 1-8 and 36, which are presented in the Claims Appendix, stand finally rejected.

20   Accordingly, the Appellant hereby appeals the final rejection of Claims 1-8 and 36.

V.   Status of Amendments

Following a final Office action, dated August 5, 2005, Appellant filed a response on

25   September 27, 2005, requesting reconsideration of the rejection of Claims 1-8 and 36. In
response to this request, an Advisory Action was issued on October 11, 2005, reiterating the
previous ground of rejection. It is further noted that a Pre-Appeal Brief Request for Review
resulted in this case being passed on to the Board of Patent Appeals and Interferences for
resolution thereby.

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VI.   Summary of Claimed Subject Matter

The present invention relates to secure communications for information flow between two or more computers. In one embodiment, a method of establishing a secure communication channel for information flow between two or more computers (108, 112) communicating via an

5   interconnected computer network (106) includes receiving a security association data structure from one or more computers via the interconnected computer network. The received security association data structure is stored in a memory region having a specific memory address value associated therewith, and the specific memory address value is assigned as a security parameter index value associated with the received security association data structure (FIG. 6; STEPS 604-

10   612; pg. 6, ll. 4-28).

In another embodiment, a method of establishing a secure communication channel for information flow between two or more computers (108, 112) communicating via an interconnected computer network (106) includes receiving a security association data structure from one or more computers via the interconnected computer network. The received security

15   association data structure is in a memory region having a specific memory address value associated therewith, and the specific memory address value is assigned as a security parameter index value associated with the received security association data structure. The security parameter index value is transmitted to the one or more computers from which the security association data structure was received (FIG. 6; STEPS 604-616; pg. 6, l. 4 through pg. 7, l. 7).

20   In yet another embodiment, a computer-readable medium containing computer executable code is provided for instructing a computer to establish a secure communication channel for information flow between one or more other computers (108, 112) communicating via an interconnected computer network (106). The instructions on the computer-readable medium include receiving a security association data structure from one or more computers via

25   the interconnected computer network, storing the received security association data structure in a memory region having a specific memory address value associated therewith, and assigning the specific memory address value as a security parameter index value associated with the received security association data structure (FIG. 6; STEPS 604-612; pg. 6, ll. 4-28).

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VII.   Grounds of Rejection to be Reviewed on Appeal

The grounds of rejection to be reviewed in this appeal are as follows:

5   1.   Claims 1, 4, and 36 were rejected under 35 U.S.C. § 102(e) as allegedly being anticipated by U.S. Patent No. 6,845,449 (Carman et al.).

2.   Claims 2, 6, and 8 were rejected under 35 U.S.C. § 103 as allegedly being unpatentable over Carman et al. and U.S. Patent Application Publication No. 2002/0184487 (Badamo et al.).

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3.   Claims 3 and 7 were rejected under 35 U.S.C. § 103 as allegedly being unpatentable over Carman et al., Badamo et al., and RFC791.

4.   Claim 5 was rejected under 35 U.S.C. § 103 as allegedly being unpatentable over
15   Carman et al. U.S. Patent No. 6,055,236 (Nessett et al.).

VIII.   Arguments

20   I.   CLAIMS 1, 4, and 36 ARE NOT UNPATENTABLE UNDER 35 U.S.C. § 102
         AS BEING ANTICIPATED BY CARMAN ET AL.

In the final Office Action dated August 5, 2005, Claims 1, 4, and 36 were rejected under 35 U.S.C. § 102 as allegedly being anticipated Carmen et al. As will be explained in more detail
25   herein below, this rejection is not tenable because at least one element recited in each of independent Claims 1 and 36 is not found in the cited reference.

A.   Carmen et al.

Carman et al. relates to a system and method for detecting and correcting errors using an
30   authentication mechanism, and discloses receiving security association (SA) payloads,

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responding with the lowest number transform that supports the SA, and generating a suite of SAs, one for each common authentication gear between communicants (col. 17, ll. 3-53). Carman et al. further discloses sending a security parameter index (SPI) and SA information to a PF_KEY module for storage in a security policy database (SPD) and a security association

5   database (SAD), respectively (col. 17, ll. 57-60), and using the SPI to access the SAD to retrieve appropriate authentication gear information (col. 18, ll. 7-56).

B.   Analysis

It is well settled that in order to anticipate a claim, a citation must expressly or inherently

10   describe all of the elements of the claimed subject matter. In re Robertson, 169 F.3d 743, 745, 49 USPQ2d 1949, 1950 (Fed. Cir. 1999); Constant v. Advanced Micro-Devices, Inc., 848 F.2d 1560, 1571, 7 USPQ2d 1057, 1064 (Fed. Cir. 1988). The citation must describe and enable the claimed invention, including all claim limitations, with sufficient clarity and detail to establish that the subject matter already existed in the prior art and that its existence was recognized by

15   persons of ordinary skill in the field of the invention. Crown Operations International, Ltd. v. Solutia Inc., 289 F.3d 1367, 1375, 62 USPQ2d 1917, 1921 (Fed. Cir. 2002); In re Spada, 911 F.2d 705, 708, 15 USPQ2d 1655, 1657 (Fed. Cir. 1990) ("the reference must describe the applicant's claimed invention sufficiently to have placed a person of ordinary skill in the field of the invention in possession of it"). Thus, an allegedly anticipating citation "must disclose every

20   element of the challenged claim and enable one skilled in the art to make the anticipating subject matter." PPG Industries, Inc. v. Guardian Industries Corp., 75 F.3d 1558, 1566, 37 USPQ2d 1618, 1624 (Fed. Cir. 1996).

Independent Claim 1 relates to method of establishing a secure communication channel for information flow between two or more computers communicating via an interconnected

25   computer network, and independent Claim 36 relates to a computer-readable medium containing computer executable code for instructing a computer to carry out the method of independent Claim 1. Independent Claims 1 and 36 each include the steps of receiving a security association data structure from one or more computers via the interconnected computer network, and storing the received security association data structure in a memory region having a specific memory

30   address value associated therewith, and each recites, *inter alia*, assigning the specific memory

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address value as a security parameter index value associated with the received security association data structure.

According to the final Office action, the latter function noted above, namely using the SPI to access the SAD, allegedly constitutes "assigning the specific memory address value as a

5   security parameter index value associated with the received security association data structure," as is recited in independent Claims 1, 6, and 36. In support of this allegation the Office action states that because <u>Carman et al.</u> teaches that the SPI value is "used to access the SAD," then "the SPI must be the index (address value) associated with the SA." <u>See</u> Office action at 2. Applicants submit, however, that is an erroneous conclusion.

10   Applicants fully admit in the background portion of the instant application that "using" the SPI to access the SAD is well-known. Specifically, Applicants fully disclose that the known methodology is to hash the SPI value together with the destination address and security protocol to create a hash key, which is used to hash into the SAD to find a match using a linear search technique. However, as Applicants have repeatedly argued, Applicants' invention, as is clearly

15   and unambiguously recited in the independent claims, is not directed to a method of merely "using" the SPI value to access the SAD. Rather, Applicants' claimed method is much more specific in that the assigned SPI value is the specific memory address value in which the associated SA is stored in the SAD (see Amendment dated March 4, 2005 at page 8; Amendment dated August 5, 2005 at page 3). At no time has the Examiner pointed to any location in <u>Carman</u>

20   <u>et al.</u> where this specific feature is disclosed, taught, or even remotely suggested. The only teaching even remotely related to the "use" of the SPI goes no further than the previously mentioned generalized statements of SPI usage.

Based on the generalized statements associated with how the SPI is used, the skilled artisan reading <u>Carman et al.</u> could only conclude that the teaching refers to what was generally

25   known in the art at the time the inventors invented the instant invention. Without the luxury of Applicants' own disclosure a skilled artisan would not have even considered the generalized teaching of "using" the SPI to access the SAD to mean that the SPI is the specific address value in the SAD at which the associated SA is stored.

Hence, Applicants submit that <u>Carman et al.</u> does not describe and enable the claimed

30   invention with sufficient clarity and detail to establish that the claimed invention existed in the

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prior art or that its existence was recognized ordinarily skilled artisans. Specifically, this citation fails to disclose, either explicitly or inherently, at least the above-noted feature of independent Claims 1 and 36. As such, Applicants respectfully request reconsideration and withdrawal of the § 102(e) rejection. Moreover, because independent Claims 1 and 36 are not anticipated, then

5   dependent Claim 4 is also not anticipated.

     II.   CLAIMS 2, 6, and 8 ARE NOT UNPATENTABLE UNDER 35 U.S.C. § 103

         OVER CARMAN ET AL. AND BADAMO ET AL.

10   In the final Office Action dated August 5, 2005, Claims 2, 6, and 8 were rejected under 35 U.S.C. § 103 as allegedly being unpatentable over Carmen et al. and Badamo et al.. As will be explained in more detail herein below, this rejection is not tenable at least because elements recited in independent Claim 6 are not found in either of the cited references.

15   A.   Carmen et al.

Carmen et al. was described above, and will therefore not be described further.

     B.   Badamo et al.

Badamo et al. relates to a network gateway device and method for receiving and

20   transmitting secure data, and was cited in the final Office action as allegedly transmitting a security parameter index value to one or more computers from which a security association data structure was received. See final Office action at 4.

     C.   Analysis

25   The Examiner bears the initial burden of establishing a *prima facie* case of obviousness. In re Fine, 837 F.2d 1071, 1074 (Fed. Cir. 1988). Indeed, the Examiner has the burden of setting forth a detailed evidentiary basis for the teaching, suggestion or motivation to combine the cited references. As the Court of Appeals for the Federal Circuit has repeatedly stated, the factual inquiry of whether to combine references must be thorough and searching, and must be based

30   upon the objective evidence of record. In re Sang Su Lee, 277 F.3d 1338, 1343 (Fed. Cir. 2002).

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Moreover, a claim cannot be found *prima facie* obvious unless all the elements of the claim are taught or suggested in the cited art. In re Royka, 490 F.2d 981, 180 U.S.P.Q. 580 (C.C.P.A. 1974); In re Wilson, 424 F.2d 1382, 1385 (C.C.P.A. 1970) ("All words in a claim must be considered in judging the patentability of that claim against the prior art."). Just because a prior

5   art reference *can* be modified does not render the proposed modification obvious unless the prior art suggests the desirability of making the proposed modification. In re Mills, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990). Appellants submit that the Examiner has not met his burden, since the references do not teach or suggest all of the claim elements.

In particular, and as was noted previously, despite the Examiner's allegations to the

10   contrary, nowhere does Carmen et al. disclose, or even remotely suggest, at least assigning the specific memory address value as a security parameter index value associated with the received security association data structure, as is recited in independent Claims 1 and 6. Moreover, Badamo et al. does not make up for this clear and unmistakable deficiency of Carmen et al.

In view of the foregoing, Appellant submits that independent Claims 1 and 6 are not

15   obvious over Carmen et al. in view of Badamo et al. Moreover, because independent Claims 1 and 6 are nonobvious, then dependent Claims 2 and 8 are also nonobvious. In re Fine, supra.

III.   CLAIMS 3 and 7 ARE NOT UNPATENTABLE UNDER 35 U.S.C. § 103

20   OVER CARMAN ET AL., BADAMO ET AL., AND RFC791.

The final Office action of August 5, 2005, also rejected Claims 3 and 7 under 35 U.S.C. § 103 as being unpatentable over Carmen et al. and Badamo et al., in view of RFC791. As will be explained in more detail herein below, this rejection is not tenable for at least the same reason

25   delineated above.

A.   Carmen et al. and Badamo et al.

Carmen et al. and Badamo et al. were both described above, and will therefore not be described further.

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B.   RFC791

RFC791 is the DARPA Internet Program Protocol Specification, and was cited in the final Office action as disclosing 32 bit memory address values. See final Office action at 6.

5   C.   Analysis

As is clear from the previous description, Carmen et al. fails to disclose at least one feature of independent Claims 1 and 6. Moreover, Appellant submits that neither Badamo et al. nor RFC791 disclose at least the deficient features of independent Claims 1 and 6, and thereby fails to make up for the previously noted deficiency of the Carmen et al.

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IV.   CLAIM 5 IS NOT UNPATENTABLE UNDER 35 U.S.C. § 103 OVER CARMAN ET AL. AND NESSETT ET AL.

15   The final Office action of August 5, 2005, rejected Claim 5 under 35 U.S.C. § 103 as being unpatentable over Carmen et al. and in view of Nessett et al. As will be explained in more detail herein below, this rejection is not tenable for at least the same reason delineated above.

A.   Carmen et al.

20   Carmen et al. was described above, and will therefore not be described further.

B.   Nessett et al.

Nessett et al. relates to a system and method for locating network services with distributed network address translation, and was cited in the final Office action as disclosing that

25   received security association data structures include a network destination value and a security protocol identifier. See final Office action at 7.

C.   Analysis

As is clear from the previous description, Carmen et al. fails to disclose at least one

30   feature of independent Claims 1 and 6. Moreover, Appellant submits that Nessett et al. fails to

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disclose at least the deficient features of independent Claims 1 and 6, and thereby fails to make up for the previously noted deficiencies of the <u>Carmen et al</u>.

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IX.   CONCLUSION OF ARGUMENTS

In view of the foregoing, Appellant submits that the final rejection of Claims 1-8 and 36 is improper and should not be sustained. Therefore, a reversal of the rejections in the final Office action dated August 5, 2005, is respectfully requested.

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Respectfully submitted,

Dated February 7, 2006

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X. CLAIMS APPENDIX

Claims on Appeal

1.   A method of establishing a secure communication channel for information flow between two or more computers communicating via an interconnected computer network, comprising:

receiving a security association data structure from one or more computers via the interconnected computer network;

storing the received security association data structure in a memory region having a specific memory address value associated therewith; and

assigning the specific memory address value as a security parameter index value associated with the received security association data structure.

2.   The method of claim 1, further comprising:

transmitting the security parameter index value to the one or more computers from which the security association data structure was received.

3.   The method of claim 1, wherein the specific memory address value and the security parameter index value, are both 32 bit values.

4.   The method of claim 1, wherein the received security association data structure is stored in a security association database that includes other security association data structures.

5.   The method of claim 1, wherein the received security association data structure comprises a network destination address value and a security protocol identifier.

10

6.   A method of establishing a secure communication channel for information flow between two or more computers communicating via an interconnected computer network, comprising:

receiving a security association data structure from one or more computers via the
5   interconnected computer network;

storing the received security association data structure in a memory region having a specific memory address value associated therewith;

assigning the specific memory address value as a security parameter index value associated with the received security association data structure; and

10   transmitting the security parameter index value to the one or more computers from which the security association data structure was received.

7.   The method of claim 6, wherein the specific memory address value and the security parameter index value, are both 32 bit values.

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8.   The method of claim 6, wherein the received security association data structure is stored in a security association database that includes other security association data structures.

36.   A computer-readable medium containing computer executable code for
20   instructing a computer to establish a secure communication channel for information flow between one or more other computers communicating via an interconnected computer network, the instructions comprising:

receiving a security association data structure from one or more computers via the interconnected computer network;

25   storing the received security association data structure in a memory region having a specific memory address value associated therewith; and

assigning the specific memory address value as a security parameter index value associated with the received security association data structure.

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XI. EVIDENCE APPENDIX

No evidence pursuant to 37 C.F.R. §§ 1.130, 1.131, or 1.132 has been entered by the Examiner or relied upon by Appellant in the instant appeal beyond that which is already contained in the as-filed application, as is delineated in the Arguments section of this Brief.

XII. RELATED PROCEEDINGS APPENDIX

As there are no related appeals and interferences, there are also no decisions rendered by a court or the Board of Patent Appeals and Interferences that are related to the instant appeal.

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